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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NOVEL RECOMBINANT ANTICOAGULANT PROTEINS

(57) Abstract: Novel recombinant anticoagulation proteins, methods of their use and methods of their production are described. In particular, recombinant fusions of annexin V (ANV) and Kunitz protease inhibitors (KPI) that possess potent anticoagulant activity are provided. The fusions, abbreviated ANV:KPI, utilize ANV having high affinity for phosphatidyl-L-serine with various KPI's to target serine proteases in membrane-associated coagulation complexes in the blood coagulation cascade. ANV:KPIs are potentially useful antithrombotic drugs permitting localized passivation of thrombogenic vessel walls and associated thrombi.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/17442

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07H 21/04; C07K 5/00, 14/00; C12N 15/63, 15/00  
US CL : 435/320.1, 325, 69.6; 514/2, 822; 530/300, 350; 536/23.4  
According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 435/320.1, 325, 69.6; 514/2, 822; 530/300, 350; 536/23.4

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JANG et al. Influence of Blockade at Specific Levels of the Coagulation Cascade on Restenosis in a Rabbit Atherosclerotic Femoral Artery Injury Model. Circulation. 15 November 1995, Vol. 92, pp. 3041-3050.	1-23
A	DENNIS et al. Kunitz Domain Inhibitors of Tissue Factor-Factor VIIa. J. Biol. Chem. 02 September 1994, Vol. 269, No. 35, pp. 22129-22136.	1-23
A	LEFKOVITS et al. Selective inhibition of factor Xa is more efficient than factor VII tissue factor complex blockade at facilitating coronary thrombolysis in the canine model. J. Am. Coll. Cardiol. December 1996, Vol. 28, No. 7, pp. 1858-1865.	1-23

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

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- "P" document published prior to the international filing date but later than the priority date claimed

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document member of the same patent family

Date of the actual completion of the international search

09 September 2003 (09.09.2003)

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# INTERNATIONAL SEARCH REPORT

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## Continuation of B. FIELDS SEARCHED Item 3:

STN (Bioscience); EAST (all databases); Sequence search for SEQ ID NOs: 1-10; search terms: kunitz inhibitor, annexin V, TFPI, antistasin, ATS, Tick anticoagulant protein, TAP, ancylostoma caninum anticoagulant peptide (AcAP5, AcAP6, Kapp, fusion, Wun, Tze-Chein.